

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants : Young-Seo Park et al.  
For : **CHANNEL CONDITION ESTIMATION FOR PILOT  
COEFFICIENT SELECTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

**INFORMATION DISCLOSURE STATEMENT**

**UNDER 37 CFR §1.97(b)**

Pursuant to 37 CFR §§1.56 and 1.97(b), Applicants bring to the attention of the Examiner the documents listed on the attached Form PTO 1449. This Information Disclosure Statement is being filed with above referenced application.

In accordance with the waiver of the requirement under 37 CFR 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC § 371 after June 30, 2003, Applicants have not enclosed copies of the U.S. references listed on the attached Form PTO 1449. However, copies of the articles listed are submitted herewith. Applicants respectfully request that the Examiner consider the listed documents and evidence that consideration of relevant portions thereof by making appropriate notations on the attached forms.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that the listed document is material or constitutes "prior art." If it should be determined that the listed document does not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such document.

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Atty. Docket : CM05628J  
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Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should the documents be applied against the claims of the present application.

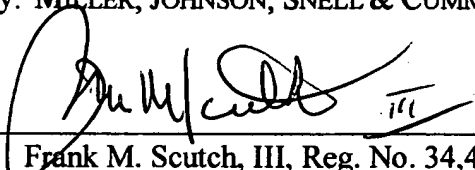
Respectfully submitted,

YOUNG-SEO PARK ET AL.

By: MILLER, JOHNSON, SNELL & CUMMISKEY, P.L.C.

Date

10/31/03

  
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Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

### Complete if Known

Application Number	
Filing Date	
First Named Inventor	Young-Seo Park
Art Unit	
Examiner Name	
Attorney Docket Number	CM05628J

Sheet 1 of 2

### U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 6,424,678	07-23-2002	Doberstein et al.	
		US- 6,298,094	10-02-2001	Dehner et al.	
		US- 6,192,040	02-20-2001	Jalloul et al.	
		US- 6,141,393	10-31-2000	Thomas et al.	
		US- 5,848,357	12-08-1998	Dehner et al.	
		US- 5,406,585	04-11-1995	Rohani et al.	
		US- 5,241,544	08-21-1993	Jasper et al.	
		US- 5,140,615	08-18-1992	Jasper et al.	
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### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

Examiner  
Signature

Date  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<b>Complete if Known</b>	
		Applicant Number	
		Filing Date	
		First Named Inventor	Young-Seo Park
		Art Unit	
		Examiner Name	
Sheet 2	of 2	Attorney Docket Number	CM05628J

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		JAMES K. CAVERS, "An Analysis of Pilot Symbol Assisted Modulation for Raleigh Fading Channels," IEEE Transactions on Vehicular Technology, Nov. 1991, pp. 686-693	
		HAIYUN TANG, KAM Y. LAU, & ROBERT W. BRODERSEN, "Interpolation-Based Maximum Likelihood Channel Estimation Using OFDM Pilot Symbols," Berkeley Wireless Research Ctr., undated	
		IVAN PERISA, JOCHEM EGLE & JURGEN LINDNER, "Channel Estimation with Pilot-Symbols over WSSUS Channels," Univ. of Ulm (Germany), Dept. of Information Technology, undated	

Examiner Signature		Date Considered	
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